Mental Health Issues and Consideration in Post Covid-19 era

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Abstract:
Background: Corona virus disease (Covid-19) entered at the end of last year in China, and slowly occupied rest of world. In India, Government declared complete Lockdown in second half of March, soon after three or four months later country slowly lifted Lockdown. But, covid-19 pandemic is still there. Along with biological complication due to covid-19, we suffered with lots of mental health issues due to psychological and economical aspects.
Objective: Aim of this study is to assess mental health status irrespective of gender, age group, location, stress, chronic disease and covid-19 infection. Also, to investigate mean difference between various demographic variables in order to examine most vulnerable people towards mental health illness.
Material and method: Due to covid-19 and social distancing, the researchers were carried this study using demographic variables and the mental health inventory (MHI-38) in internet and social media platform from September 13 to September 23, 2020. The data collected were more than hundred, but the researchers took only hundred respondents to analyse data statistically and the results were interpreted.
Conclusion: The result revealed that mean difference of mental health in relation to gender, age group, and stress were statistically significant and their corresponding p-value were 0.0447, 0.0048 and 0.0001 respectively. Mental health status increases with increase income, and there were no statistical significant in respective to covid-19 testing, location, or chronic disease. The researchers have concluded this study with mental health consideration from latest reviewed paper and mentioned possible strategies to control mental health problem.

*Keyword: Post Covid-19 era, Mental Health, Psychiatric Patients, Pandemic, Anxiety, Depression*

1. INTRODUCTION:

Our Nation is lifting lockdown step by step due to psychological and economical issues of people even in covid-19 pandemic time. Presently, at the end of September 2020, total number of covid-19 positive cases were 55,60,105, nearly 44,94,720 (98%) of active cases were recovered completely from covid-19 and only 88,965(2%) of total cases were death, most of them were associated with other chronic illness. In India, 6,43,92,594 samples were tested which is only 5% of Indian population. The data shown in Fig-1 is a covid-19 curve from march 2020
to third week of September which have shown, we are in peak of curve, that mean number of covid-19 positive were high (95,259.8) on 14th September 2020, but it gets slowly decline. It denotes numerous questions regarding covid-19 positive cases in future, because government is lifting lockdown slowly and also opened public transport. Actions which were taken by government is just acceptable when we can be considered it from psychological and economical point of view. Mukherjee, Bandopadhyay and chatterjee (2020) mentioned 11.5%

(150 million people) of Indian population were suffered mental health problem either in any forms such as mental disorder, intellectual disorder, anxiety, depression, OCD etc. But number of Psychiatrist is 9,000 only (0.7 Per 1 lakhs Peoples). Among every ten million people, two psychologist, and six psychiatric Para staffs are only available. In other hand, government spent only 0.06% of total healthcare budget in mental health care.

Figure-1, Daily Confirmed new cases (5-day moving average):

Source: MOHFW(India) and John Hopkins
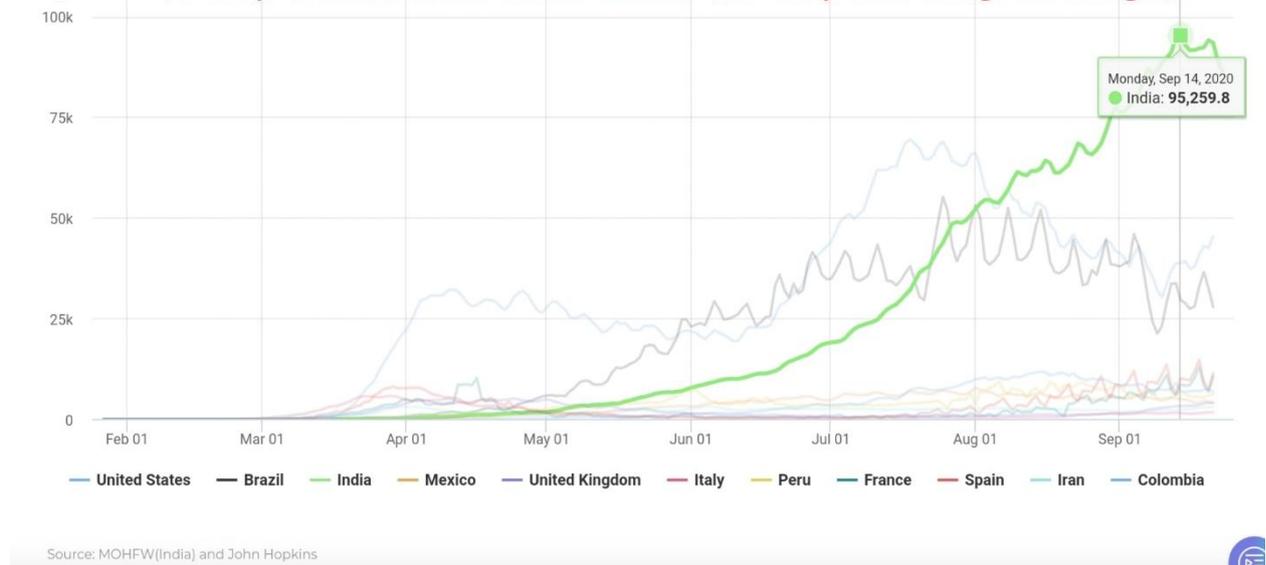
Covid-19 Impact on Mental Health :-

Fear and anxiety over any new disease can cause strong emotional disturbance among us. In pandemic condition of any disease either knowingly or Unknowingly can create many psychological consequence like stress, anxiety, mental health problems…etc. The corona virus disease 19 (Covid-19) needs public healthy actions such as social distancing, isolation and quarantine irrespective of symptomatic outputs. Centers for Disease control and prevention (CDC) stated stress during an infectious disease can lead to fear, worry, changes in sleep or eating patterns, difficulty sleeping or concentrating, worsening of chromic and increased use of tobacco, alcohol and substance abuse. Nayar, Joseph, Bhandari, Dutta and Shoib (2020) stated occurrence of huge number of mental health and Psychosocial problems in associated with covid-19. Golechha (2020) revealed current economic issues, health inequalities, social disparities and different cultural habits and behaviors can further worsen through extending lockdown leads to emerging mental health issues and cause long lasting health problems. Mcpeake & Pattison, (2020) mentioned exacerbation of mental health and emotional problem can occur for a hospitalized patients due to social isolation which can leads to substance abuse or systematic chronic diseases. Berg-Weger & Morley (2020) mentioned among older adults one-third of their population experiences loneliness and social isolation. O'Neil, Nicholls, Redfern, Brown, and Hare (2020) revealed anxieties among people with cardio vascular disease can lead to behavioral changes and unwanted consequences. Greenberg, Brooks, Wessely and Tracy (2020) stated health care professionals, covid-19 frontline warriors are very anxious with risk of infection, and their families can lead to mental health problems.

Mental Health in Post-Covid-19 era:-

The Experiences and emotional feeling which were created from lockdown and covid-19 pandemic impacts our mental health status. Türközer & Öngür (2020) mentioned if pandemic comes unusual can result more dangers and threat with unknown end date. Presently,

Government lifted lockdown step by steps, even through we are in peak of covid-19 as we mentioned earlier. Still, everybody can prone to covid-19 infection which constantly gives pressure us toward fear and anxiety. In post-Covid-19 era we have two main challenges such as possibilities of covid-19 infection and mental health care with or without covid-19 infection. Here, the researcher willing to mention three consideration about mental health aspects in Post-Covid-19 era.

1) Mental Health of Psychiatric Patients (Confirmed Cases) with mental health rehabilitation individuals

2) Mental Health of Normal people with (or) without chronic disease such as diabetic , cardiovascular disease, or cancer.

3) Mental Health of Healthcare Professionals and frontline covid-19 warriors. Among these three mental health approaches, the researchers concentrate only on mental health of normal people with or without chromic disease through an experimental survey study by using the Mental Health Inventory (MHI-38) .

2. MATERIAL AND METHODS :-

Aim and objective of this study is to detect mental health status in post covid-19 era with respective to age, gender, location, income status, chromic disease, covid-19 infection and post covid-19 stress, and statistically assess their mean difference using student 't' test.. Here, the researchers also going to see outcome of mental health dimensions such as anxiety, depression, loss of behavior and emotional control, general positive affect, emotional tie and life satisfaction. The researchers designed an experimental study to assess level of mental health individually using the mental health inventory (MH-38) in the form of quantitative and descriptive study to be carried in internet platform and social media network due to covid-19 pandemic occasion where we can not carry our study as usual manner, because of social distancing. As digitalization increases among people, social media and internet network play are powerful tool in analyzing human behavior and mental health status. Biester, Matton, Rajendran, Provost, and Mihalcea (2020) have studied quantizing mental health effect from covid-19 through mental health support form in Reddit platform of social media. Similarly Rahman, Ali, Li, Paul and Chong (2020) have analyzed Twitter data set in order to understand factors related to positive and negative emotions of the people about post covid-19 consequences. Here, the researchers have conducted quantitative study through Google forum using the mental Health inventory (MH-38) and demographic data form with Gender, Age, Location, income, chronic disease, strep type and Covid-19 status. The mental health inventory (MH-38) was developed by veit and Wara (1983) contains 38 items in six-point likert-style response, and has 0.93 Cronbach Alphas Validity and Reliability. Questions in the inventory are very simple and ask responses from past one month. Examples " How Much of the time have you felt lonely during the past month?." During the past month, how much of the time you a happy person?" and "During the past month have you been anxious or worried?" The data collected through Google Form in internet and social Media platform from September 13th to 23rd 2020. The collected data were analyzed using Excel Sheet and Student 't' test for mean difference between variables with respect mental health status.

3. RESULTS :-

The data collected in internet and social media platform from more than hundred respondents who belonged to Indian nationality residing in various countries. Here the researchers interpreted only 100 sample to analyze mental health status statistically. Based on demographic details the respondents further divided into male and female based on gender, age group (below 35 and above 36), location (urban and rural) , income status as low income (Below 15,000), Medium income (15,000 to 30,000) and high income (Above 30,000) , with and without chronic disease, stress status, and covid-19 infections. The mean and standard deviation was calculated for corresponding group using excel sheet. The mean and standard deviation of various group are mentioned in Figure–2. The mean difference in mental health status of various group people are statistically calculated with respect to overall mean and standard deviation of the whole respondents. Figure-2 revealed statistical significant mean difference of various demographic variables. The mean and standard deviation of male

Figure-3 Mental Health Status among various variable in Post covid-19

Total Respondents (100) => 125.81 (Mean) & 38.94 (SD), Z score is calculated and divided redpondents into lower and higher than mean of overall.

Variables			
Gender	lower MH	Total	Percentage
Male Respondents	14	40	35%
Female Respondents	34	60	57%
Age Group	lower MH	Total	Percentage
Below 35 years	33	59	56%
36 years & above	16	41	39%
COVID-19 Testing	lower MH	Total	Percentage
COVID-19 not tested	40	85	47%
COVID-19 Positive	4	5	80%
COVID-19 Negative	4	11	36%

Location	lower MH	Total	Percentage
Urban respondents	34	71	48%
Rural respondents	13	29	45%
Income status	lower MH	Total	Percentage
Below 15,000 INR	17	33	52%
15,001 - 30,000 INR	16	34	47%
Above 30,001 INR	15	33	45%
Chronic Disease	lower MH	Total	Percentage
with Ch.Disease	6	18	33%
with out Ch.Disease	42	82	51%
Stress	lower MH	Total	Percentage
with stressed	47	77	61%
with out stressed	2	23	9%

Location	N	Mean	S.D	p-value	
Urban respondents	71	124.53	39.1	0.7905	Statistically is not significant
Rural respondents	29	126.78	36.3	FALSE	

Stress	N	Mean	S.D	p-value	
with stressed	77	113.64	33.1	0.0001	Statistically is significant
with out stressed	23	166.52	27.9	TRUE	

respondents are 135.77 and 39.14 respectively with female respondents (119.83 and 37.9) and were statistically significant with the p-value is 0.0447. Similarly statistical mean difference were found among age group (below 35 and above 36) and people with our with out stressed with p-values are 0.0048 and 0.0001 respectively. Mental health status increases with increase income. The researchers further stated there are no statistical significant mean difference with respect to covid-19 testing, location (urban and rural), and chronic diseases and . But, among the covid-19 tested individuals with positive cases, there is decrease mental health status and their mean value (113.6) is very low in compare with all. Figure-3 mentioned mental health status among various variables in post covid-19 era. The researchers derived z-scores from overall mean and standard deviation of respondents. Based on z-score, the researchers have divided respondents into lower and higher mental health scores in order to identify vulnerable population towards mental health problems. Among the individual with covid-19 positive, stress, female or below 35 years of age, more than 50% of them are having lower mental health score with respect to overall mean.

Individual difference in various dimensions of mental health such as anxiety, depression, loss of behavioral and emotional control, general positive affect, emotional ties, and life satisfaction various from person to person and measured. It gives full understanding of their mental health which helps us to plan mental health awareness program as well as individual psychological counselling. 76 individual from hundred respondents themselves told about presence of their stress and their corresponding mental health status also revealed presence of poor mental health. Only 6 individual out of 76 stressed respondents have scored higher than mean in all dimensions of mental health.

Mental health Considerations:-

Mental health professionals available in healthcare organization, residential communities, and social services sectors are to be in frontline in controlling serious consequences of mental health irrespective of age, gender, location, income, status, chronic disease, stress and covid-19 infection. Berg-Weger & Morley (2020) suggested use of video conferencing, visual reality, daily telephone reassurance calls, home delivery services, prevention education, virtual and phone health care visits are effective mental health measures and work as a part of mental health practices. Hansel, Saltzman, & Bordnick (2020) proposed 4 step service system designed for different group as SBIRT (Screening, Brief-Intervention and Reversal to Treatment). Echegaray (2020) published a booklet with title "Anticipating the post-Covid-19 world implications for sustainable lifestyles", where he targeted 12 domains such as work and workplace, family and love/parent hood, social life & interpersonal, wellbeing, education & treasury, leisure & entertainment, consumption, mobility, housing citizenship, financial security and health care reassurance. Sinha et al (2020) stated an idea towards mental health friendly cities during and after covid-19, where they proposed an conceptualization with three dimensions of wellbeing- self, society and space in order to create mental health friendly cities in post-covid-19 period. Mcpeake & Pattison (2020) suggested a frame work with potential strategies for supporting both patients and families in all aspects especially mental health from nursing care till assessment with management of mental and emotional health. Park, Steckler, Amy, & Jennifer (2020) implementation of six evidence informed leadership practices during post covid-19 period such as 1) Humanize yourself, humanize other, 2) Aim high, and encourages others to do the same, 3) Care for yourself and encourage a culture of self, 4) Flatten hierarchies and spur innovation, 5) Prioritize time for individual and collective recovery and reflection and 6) Invest in relationship – based forms of leadership development. Golecheha (2020) suggested to our government to consider the necessarily of strong public health system and increasing budget in health as well as mental health sector to create resilient near future.

4. CONCLUSION:-

In summary, the researchers explained covid-19 impacts on individual's mental health through psychological as well as economical aspects. It is necessary to analyze individual mental health in simple and fast way to all people irrespective of gender, age, location, income status or covid-19 infection. But, it is very mandatory to individual who perceived themselves about their own stress. This approach will definitely help to control mental health issues in post covid-19 era. Here, The researchers examined all aspects of mental health dimensions such as anxiety, depression, loss of behavior & emotional control, general positive affect, emotional tie and life satisfaction. The mental health inventory (MHI-38) also give their score for psychological wellbeing and psychological distress apart from mental health. So, approaching mental health issue through this telehealth digital approach and targeting in-depth to most affected person along with mental health online awareness webinars to targeted people are

more effective in controlling mental health issue in post covid-19 era. Mental health consideration which revealed in this study are also helpful in mass awareness programme in post covid-19 era.

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